植 物 分 类 学 报 33(6):597～601(1995)
Acta phytotaxonomica Sinica

贡山竹属——我国云南竹亚科一新属

李德铢** 薛纪如
(中国科学院昆明植物研究所，昆明 650204) (西南林学院，昆明 650224)
夏念和
(中国科学院华南植物研究所，广州 510650)

GAOLIGONGSHANIA, A NEW BAMBOO GENUS FROM YUNNAN, CHINA

Li De-zhu** Hsueh Chi-ju
(*Kunming Institute of Botany, Academia Sinica*, Kunming 650204) (*South-western Forestry College*, Kunming 650224)
Xia Nian-he
(*South China Institute of Botany, Academia Sinica*, Guangzhou 510650)

Abstract A new bamboo genus, *Gaoligongshania* D. Z. Li, Hsueh et N. H. Xia is described here to accommodate *Arundinaria megathyrsa* Hand.-Mazz. from Northwest Yunnan, China after comprehensive collection and study of the species. The new genus is certainly a member of the subtribe Arundinarinae Bentham in the sense of Clayton & Renvoize (1986) and Soderstrom & Ellis (1987) and may be a link between *Indocalamus* and the *Thamnocalamus* complex (the so-called alpine bamboos). Its inflorescence is determinate (semelauctant) with normal grass spikelets, large and conspicuously auricled leaves and single branch complements which are as thick as culms. *Gaoligongshania* is related to *Indocalamus* but has sympodial rhizomes, clustered culms, very large inflorescences, linear spikelets and three stigmas. It is sometimes epiphytic in habit. It also shows affinity with the *Thamnocalamus* complex with the same inflorescence and rhizome types. The complex, however, is one of the most difficult groups in defining bamboo genera and was considered as an independent subtribe (Keng f., 1982) or has even been put into the genus *Arundinaria* in the broadest sense (Soderstrom &

* 1993-08-05 收稿。

** 通讯联系人(To whom correspondence should be addressed). Present address: Botanic Garden, University of Cambridge, Cory Lodge, Bateman Street, Cambridge CB2 1JF, The United Kingdom.

Ellis, 1988). Even then, *Gaoligongshania* can still be considered distinct because of its branch pattern and unusual inflorescence and spikelets. Although *Gaoligongshania* is superficially similar to *Monocladus* Chia *et al.* in its vegetative state, it belongs to a different subtribe, and its reproductive state is very different from *Monocladus*. In that genus, the inflorescence is indeterminate (iterauctant) and is composed of pseudospikelets with 6 stamens and conspicuous ovary appendages.

Key words *Gaoligongshania* D. Z. Li, Hsueh et N. H. Xia; Bambusoideae

关键词 贡山竹属；竹亚科

贡山竹属　新属　图1

Gaoligongshania D. Z. Li, Hsueh et N. H. Xia, gen nov. (Tribus Bambuseae Nees, Subtribus Arundinariinae Bentham)

Plantae fruticosae, aliquando epiphyticae ad abores ; Rhizomata breviorcolliter pachymorpha. Culmi unicaespitosi, intemodiis teretibus, ramis singularibus diametro culmo subaequicrassis. Culmorum vaginae persistentes, coriaceae, auriculis magnis falcatis, ligulis brevioribus, laminis patentibus. Foliorum auriculae falcatae, laminis magnis, lanceolatis usque late lanceolatis. Inflorescentiiae paniculatae, terminales, magnae ad 40 cm longae, semelauctantes. Spiculae pedicullatae, lineares, 2～4 cm longae, 0. 2～0. 3 cm latae, laxe 4～9 forae, floribus summis steribus, rachillarum internodiis floribus duplo brevioribus, partim expositis, glumis vacuis 2, lemmatibus lanceolatis, paleis eo aequilongis, breviter bicuspidates, lodiculis 3, apicibus ciliatis, staminibus 3, stylo 1, brevissimo, stigmatibus 3, plumosis. Fructus maturi incogniti.

Genus novum *Indocalamo* Nakai affine, sed rhizomatibus breviorcolliter pachymorphibus, culmis unicaespitosis, inflorescentiis magnis, spiculis linearibus, stigmatibus 3 differt.

Typus nominis generis: Arundinaria megathyrsa Hand. -Mazz.

Species unica, in Provincia Yunnanica, austro-occidentali Sinica indigena.

灌木状竹，有时附生于树干基部。地下茎短颈粗型。秆单丛；节间圆筒形；每节分枝单一，与主秆近等粗。秆箨宿存性，革质；箨耳大，镰刀状；箨舌较低；箨片外展。叶耳镰刀状；叶片大型，宽披针形。圆锥花序顶生，大型，长达 40 cm，一次性发生花序。小穗具柄，线形，长 2～4 cm，宽 0. 2～0. 3 cm，具 4～9 小花，顶端 1 小花不孕；小穗轴长为小花的 1/2，外露；颖片 2，内无潜伏芽；外稃披针形，与内稃近等长；内稃具 2 脊，先端短 2 裂；鳞被 3 枚，先端具缘毛；雄蕊 3 枚；子房无毛；花柱短；柱头 3 裂，羽毛状。成熟果未见。

新属与箬竹属 *Indocalamus* 相近，但地下茎短颈粗型，秆丛生，花序大型，小穗线形，柱头 3 裂而明显不同。

1 种，产于我国西南云南省高黎贡山地区。

新属贡山竹属为一次性发生的有限花序、灌木状竹类，叶片大型，叶耳显著，每节分枝单一且与主秆近等粗，秆箨宿存，子房无明显附属物。这些均表明本属应为青篱竹亚族

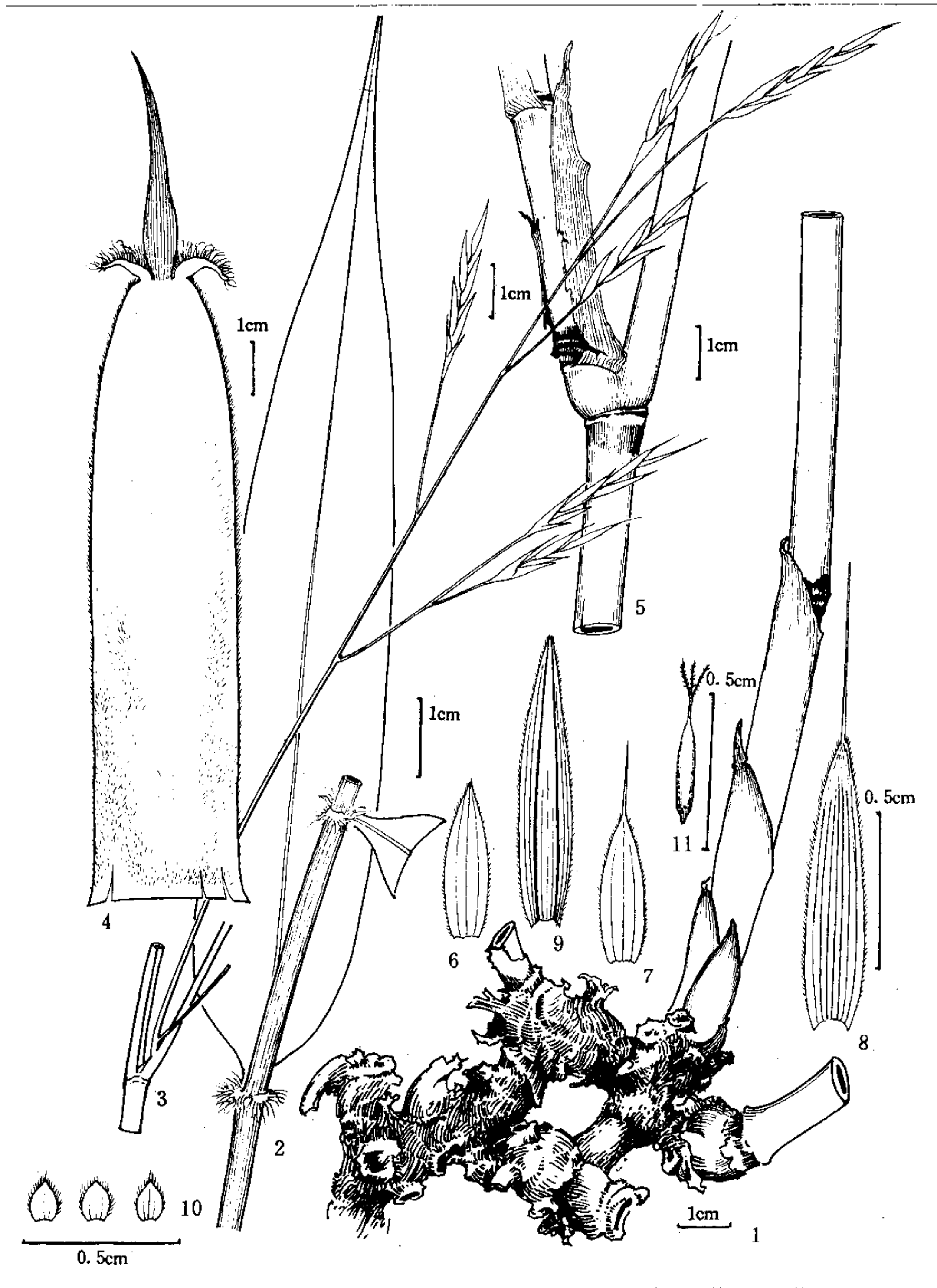


图 1　贡山竹　1. 地下茎；2. 具叶小枝；3. 花序（部分）；4. 秆箨；5. 秆及分枝；6. 第一颖；7. 第二颖；8. 外稃；9. 内稃；10. 鳞被；11. 雌蕊。（杨建昆绘）

Fig. 1　*Gaoligongshania megathyrsa*　l. rhiome; 2. portion of a branchlet; 3. portion of a inflorescence; 4. culm-sheath; 5. culm with branching; 6. lower glume; 7. upper glume; 8. lemma; 9. palea; 10. lodicules; 11. pistil.

Subtrib. Arundinarinae 之成员，且与箬竹属有些联系。但本属地下茎为短颈粗型，秆丛生，有时附生，加之花序大型，小穗线形，柱头 3 枚而与箬竹属不同，也较之原始。

对于地下茎类型在竹亚科的分类作用，一般认为具有分属价值，唯一的例外是产于中南美的 *Chusquea* 属(Clayton & Renvoize，1986)。在地下茎和花序类型上，贡山竹属又表现出与筱竹复合群(*Thamnocalamus* complex)(即所谓高山竹类)的渊源关系。该群的分类争议极大，至今仍无较统一的意见，即使同一作者在不同时期也使用不同的处理。Keng (1982) 将该群立为筱竹亚族。Soderstrom & Ellis(1987)曾建议接受筱竹属 *Thamnocalamns*、箭竹属 *Fargesia*(包括玉山竹属 *Yushania* 等属)。但后来 Soderstrom & Ellis (1988)又主张将箭竹型(fargesoid)即地下茎短颈粗型的这一类竹子置于极广义的青篱竹属 *Arundinaria* (模式种为薄型地下茎)。纵然如此，贡山竹属也可通过其大型、开展的顶生圆锥花序，线形小穗，单一且与主秆近等粗之分枝和大型之叶片与之相区别。本属与筱竹复合群的联系主要表现在 *Arundinaria hirsuta* 群(Campbell，1991)上，但后者地下茎及花序均未知，每节分枝 1～3 枚且较主秆为细。同时被置于该群的 *Yushania uniramosa* 亦无花部记载，秆柄延伸即地下茎长颈粗型。这些均表明贡山竹属的独特性。贡山竹属的发现对于揭示筱竹复合群的起源及其与箬竹属的关系，对于整个竹族(木本竹类)系统发育的研究，均具有重要意义。此外本属的附生习性也十分有趣，值得进一步研究。

在外型上，特别是在营养体阶段，本属易与单枝竹属 *Monocladus* 混淆，因两者均为短颈粗型地下茎，秆丛生，灌木状竹，分枝单一，叶片较大，箨耳及叶耳显著，但后者为续次性发生的无限花序，小穗结构迥然不同，因而隶属于不同的亚族，即簕竹亚族(Subtrib Bambusinae)。

在分布区和生境上，贡山竹属也与上述类群有一定差别或间断。贡山竹属分布在云南西北部怒江(萨尔温江)与独龙江(恩梅开江，伊洛瓦底江)的分水岭——高黎贡山，海拔 1600～2200 m 的中山常绿阔叶林内，常在老树上附生；箬竹属集中分布在我国东南部及西南地区东部(不到滇西)，特别是长江流域海拔 1000 m (西南东部可达 2000 m) 以下的低山或丘陵地带，属中国-日本区系成分；筱竹复合群则主要分布在东亚中山至亚高山地区，少数种延伸到南美及非洲，为热带(至亚热带)高山成分；单枝竹属各种分布于华南珠江流域至海南岛海拔 500 m 以下的热带或南亚热带河谷低山地带，应属热带亚洲(印度-马来)区系成分。

贡山竹(新拟) 贡山箬竹(南林学报)，大序青篱竹(云南种子植物名录)，阔叶玉山竹、阔叶单枝竹(均竹子研究汇刊)，云南单枝竹(独龙江地区植物)，拉沙(云南贡山独龙族)。

Gaoligongshania megathyrsa (Hand.-Mazz) D. Z. Li, Hsueh et N. H. Xia, comb. nov. —— *Arundinaria megathyrsa* Hand.-Mazz., Symb. Sin. **7**: 1270. 1936; C. Y. Wu, Index Fl. Yunnanensis **2**: 2131. 1984. —— *Indocalamus megathyrsa* (Hand.-Mazz.) C. S. Chao & C. D. Chu in J. Nanjing Technol. Coll. Forest. Prod. **1981** (3): 44. 1981. —— *Yushania megathyrsa* (Hand.-Mazz.) Wen in J. Bamboo Res. **6** (3): 34. 1987. —— *Monocladus megathysa* (Hand.-Mazz.) Yi in J. Bamboo Res. **12** (2): 54. 1993 ('*Monocaladus*'). —— *Monocladus macrophyllus* Hsueh & C. M. Hui H. Li, Fl. Dulongjiang

Region 366. 1993, nom. nud.

Yunnan bor. -occid. (云南西北): Prope fines Tibeto(Sin.)-Birmanicas convalle fluvii Dulongjiang(Irravadi orient, super.)(缅甸和中国西藏交界处，独龙江), in pluvii silva frondoda subtropica faucium Naiwanglong (拿万龙，生于亚热带林中), 27°53′N, alt. 2150m, 1916-07-05, Handel-Mazzetti 9343 (holotype, WU; isotype, W); the same locality (Maku, Moqiewang, Meiliwang & Mabidang)(马库，莫切旺，梅立王，麻必当), alt. 1600 ~1030m, in evergreen broadleaved fordests, 1990-12 to 1991-04, Dulongjiang Expedition (独龙江越冬考察队)1105, 1963, 1779, 3756, 4307(KUN); the same locality, 1994-10-20, Jia-r, Xue(Hsueh f.) & Y. M. Yang(薛嘉榕、杨宇明)s. n. (无号)(SWFC, with flower and rhizome); Lushui (泸水), Pianma to Wuzhong(片马至吴中), alt. 2200m, 1981-09-27, T. L. Zhang(张天龙)7407 (SWFC); Pianma(片马), alt, 2050m, 1988-12-10, C. M. Hui(辉朝茂)88103(SWFC, with rhizome); same locality (同地), Gaoligong Shan Expedition (C. M. Hui *et al.*) 9019 (SWFC, with rhizome); 1978-05-04, collector unkown 010 (SWFC, with rhizome).

Acknowledgements The first author wishes to thank Professor F. Ehrendorfer (Vienna), who kindly provided Professor Cheng-Yih Wu and himself with accommodations during their visit to the WU and W herbaria. He also wants express his gratitude to Drs. E. Shönbeck-Temesy and W. Till (Vienna) for their loan of the type specimen. Finally, we are indebted to Mr. J. K. Yang(Kunming) for the art work, and to Dr. C. D. Pigott(Cambridge) for his checking of the English of this paper.

参 考 文 献

Cambell J J N, 1991. Sino-Himalayan bamboos: towards a synthesis of western and eastern knowledge. J Amer Bamboo Soc, **8**(1~2): 12~22

Clayton W D, Renvoize S A, 1986. Genera Graminum. Grasses of the world. Kew Bull, Addit Ser. XIII. London

Keng P C, 1982. A revision of the bamboo genera of the world(part 1). J Bamboo Res, **1**(1): 15~18

Soderstrom T R, Ellis R P, 1987. The position of bamboo genera and allies in a system of grass classification. In: Soderstrom T R *et al*. ed. Grass Systematics and Evolution. Washington DC: Smithsonian Institution Press

Soderstrom T R, Ellis R P, 1988. The woody bamboos (Poaceae: Bambusoideae) of Sri Lanka: a morphological-anatomical study. Smithsonian Contrib Bot, No. 72: 1~75